

CORRES. CONTROL  
INCOMING LTR NO.

00537 RF02

DUE DATE  
ACTION

## Department of Energy

ROCKY FLATS FIELD OFFICE  
10808 HIGHWAY 93, UNIT A  
GOLDEN, COLORADO 80403-8200

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CORRESPONDENCE  
CONTROL

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DIST.	LTR	ENC
BOGNAR, E.	X	
DECK, C. A.	X	
DEGENHART, K.		
DIETER, T. J.		
DIETERLE, S. E.		
FERRERA, D. W.		
FERRI, M. S.		
GERMAIN, A. L.		
GIACOMINI, J.		
ISOM, J. H.		
LINDSAY, D. C.	X	
LONG, J. W.		
MARTINEZ, L. A.	X	
MCLAUGHLIN, J.	X	
NORTH, K.	X	
PARKER, A. M.	X	
POWERS, K.		
RHOADES, D. W.		
RODGERS, A. D.		
SHELTON, D. C.	X	
SPEARS, M. S.		
TRICE, K. D.		
TUOR, N. R.	X	
VOORHEIS, G. M.		
WILLIAMS, J. L.		
BROOKS, L.	X	
NININGER, R.	X	
CABLE, J.	X	
LANDRY, D.	X	
MOTYL, K.	X	
SINGGR, S.	X	

Mr. Steve Gunderson  
RFCA Project Coordinator  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

Mr. Timothy Rehder  
Rocky Flats Project Manager  
United States Environmental Protection Agency  
999 18<sup>th</sup> Street, Suite 500  
Denver, Colorado 80202-2466

Dear Messers Gunderson and Rehder:

Pursuant to the *Rocky Flats Cleanup Agreement (RFCA), Attachment 5, Rocky Flats Environmental Technology Site Action Levels and Standards Framework for Surface Water, Groundwater, and Soils (ALF), Part 2.4A*, the Department of Energy, Rocky Flats Field Office (RFFO) is notifying you of water-quality monitoring results at the RFCA Point of Evaluation (POE) surface-water monitoring station location GS10, which is located in South Walnut Creek upstream of Pond B-1.

The calculated 30-day moving average for americium (Am) triggered the reporting requirements under RFCA Attachment 5, Section 2.4 (B) for the period April 29, 2002 through May 10, 2002 inclusive (for details, see Table 1). Validated analytical results for all samples that were used in the calculation are listed in Table 2. Although 30-day moving average values for plutonium (Pu) did not exceed the reporting threshold during this period, the plutonium analytical results are included in Table 2 for completeness. The RFFO gained knowledge of this data on July 22, 2002. Preliminary oral notification was provided to both of you on the same day.

Please note that the calculated 30-day average for Am diminished to 0.15 pCi/L on May 11, 2002 and has remained below the reporting threshold through June 9, 2002 (analytical results after June 9 were not available as of July 22, 2002). This newest GS10 reportable event is consistent with seasonal water-quality observations made every spring/summer since 1997 at this location, following implementation of RFCA flow-paced monitoring.

Reviewed for Addressee  
Corres. Control RFP8/7/02  
DateBy *leg*

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ADMIN RECORD

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### Reportable Value Description

*Table 1 – Reportable 30-Day Average Values for RFCA POE Monitoring Location GS10*

Analyte	Dates of Reportable Value	Range of Reportable 30-day Avg. Values (pCi/L)
Americium	4/29/02 – 5/10/02	0.16 – 0.18

*Table 2 – Validated Analytical Results for Composite Samples Collected at GS10 used in the 30-day average calculation for Americium.*

Composite Sample Start Date	Americium Analytical Result (pCi/L)	Plutonium Analytical Results (pCi/L)
3/14/02	0.028	0.042
4/3/02	0.176	0.081
5/3/02	0.113	0.020

### RFCA Reporting Protocol

To meet the Site's RFCA commitment, DOE must transmit this information to the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) within the 15-day reporting period, which ends August 6, 2002. In addition, RFCA also requires that the DOE, within 30 days of gaining knowledge of the reportable results, submit to EPA and CDPHE a source evaluation plan and schedule addressing this reportable value. This plan must be transmitted by August 21, 2002. This letter serves as notification and addresses the requirement for a source evaluation plan and schedule.

### Downstream Water Quality Monitoring

Water flowing through GS10 also passes through the lower B-series ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving the Site. The RFCA Points of Compliance (POCs) GS08 and GS03 again monitor this water. GS10 analytical results and the reportable 30-day average values were compared with those for pre-discharge samples collected from Pond B-5 prior to the May 2002 direct discharge and from RFCA POC monitoring stations GS08 and GS03. Monitoring results from Pond B-5 and both POC monitoring locations met stream standards and were below reporting thresholds for the same period.

### Ongoing GS10 Source Investigation

The RFFO and its contractor Kaiser-Hill Company, LLC (Kaiser-Hill) completed the latest special source investigation of the GS10 sub-drainage in August 2001. This investigation, the *Final Source Evaluation Report for Point of Evaluation GS10: Water*

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*Years 2000 – 2001, was guided by the Sampling and Analysis Plan for Automated Synoptic Surface-Water and Sediment Sampling for the GS10 Source Investigation. This report was designed to identify location-specific subdrainage areas that may contain source areas or “hot-spots” and further define or resolve the location of discrete areas enriched in americium as compared to the Am:Pu activity ratios found in weapons-grade materials.*

The CDPHE also conducted an independent investigation of the GS10 subdrainage. CDPHE's study is guided by their quality assurance project plan *Reconnaissance Sampling Related to Source Location Investigation of Plutonium and Americium Action Level Exceedances at Point of Evaluation GS10.*

The results of these source evaluations of the GS10 subdrainage have not located a distinct source area requiring an accelerated action. Environmental Restoration (ER) program personnel will further evaluate the South Walnut Creek area between the 750 Pad and Pond B-1 during the second and third quarters of fiscal year (FY) 04 as part of the ER evaluation for Pond B-1.

#### **Recommendation**

The findings and conclusions of prior Walnut Creek and GS10 source evaluations suggest that one or more low-level distributed actinide source areas exist within the GS10 subdrainage. Additionally, Pu/Am activity ratios in the surface water during the reportable events suggest that the suspect low-level actinide source areas are relatively high in americium content as compared to the Am:Pu ratios found in weapons-grade materials. These source evaluations also concluded that ongoing RFETS activities (i.e., Decontamination and Decommissioning and ER projects, excavations, or other routine operations) did not contribute to increased contamination and reportable values.

In consideration of past source evaluation findings and conclusions, RFFO and Kaiser-Hill propose the following in response to these reportable values at GS10:

- (1) Routine monitoring as required by RFCA and the Site Integrated Monitoring Plan will continue.
- (2) Routine data evaluation for GS10 will be included in the Water Year 2002 Automated Surface-Water Monitoring Report.
- (3) Evaluation of the area by ER personnel as part of the evaluation of Pond B-1 during the second and third quarters of FY04.
- (4) No additional source evaluation for this area due to this event.

S. Gunderson and T. Rehder  
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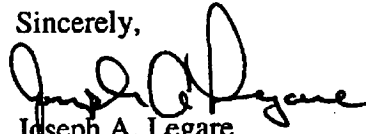
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In consultation with your staff, we will strive to augment or modify these proposed and possible actions to align them with the Site's Closure Plan.

If you have any questions concerning this transmittal, please contact me at (303) 966-2282 or Glenn Doyle at (303) 966-3087.

Sincerely,



Joseph A. Legare  
Assistant Manager for Environment and  
Stewardship

cc:

J. Legare, AMES, RFFO  
G. Doyle, AMES, RFFO  
R. DiSalvo, RC, RFFO  
W. Prymak, RC, RFFO  
J. Stover, AMEI, RFFO  
R. DiSalvo, OCC, RFFO  
S. Bell, OCC, RFFO  
D. Shelton, KH  
L. Brooks, KH  
CERCLA Administrative Record

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